

Appl. No. 09/530,233  
Amr. Dated April 18, 2003  
Reply to Office Action of October 22, 2002

Listing of Claims:

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16. (Currently Amended) A An isolated proton-gated cation channel having the amino acid sequence of SEQ. ID NO: 1 ~~2 or a variant of that sequence having at least 85% identity therewith.~~

17. (Currently Amended) A channel according to Claim 16, which forms a homopolymeric channel.

C2 18. (Original) A channel according to Claim 16 in combination with another cation channel sub-unit which together form a heteropolymeric channel.

19. (Currently Amended) A channel according to Claim 18, wherein the other cation channel belongs to the degenerin/ENaC channel superfamily.

20. (Currently Amended) A channel according to Claim 18, wherein the other cation channel is a P2X ATP-gated channel.

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21. (Currently Amended) A channel according to Claim 20, wherein the other cation channel sub-unit ~~of~~ is a P2X2 ATP-gated channel ~~sub-unit~~.

22. (Original) A nucleic acid encoding a proton-gated cation channel as defined in Claim 16.

Claims 22 - 33 are withdrawn from consideration.

C2 34. (Currently Amended) The channel of Claim 16 having at least 90% identity with the amino acid sequence of SEQ ID NO: ± 2.

35. (Currently Amended) The channel of Claim 34 having at least 95% identity with the amino acid sequence of SEQ ID NO: ± 2.

36. (Currently Amended) The channel of Claim 35 having at least 98% identity with the amino acid sequence of SEQ ID NO: ± 2.

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37. (Currently Amended) The channel of Claim 36 having  
C2 at least 99% identity with the amino acid sequence of SEQ ID  
NO:  $\pm$  2.

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